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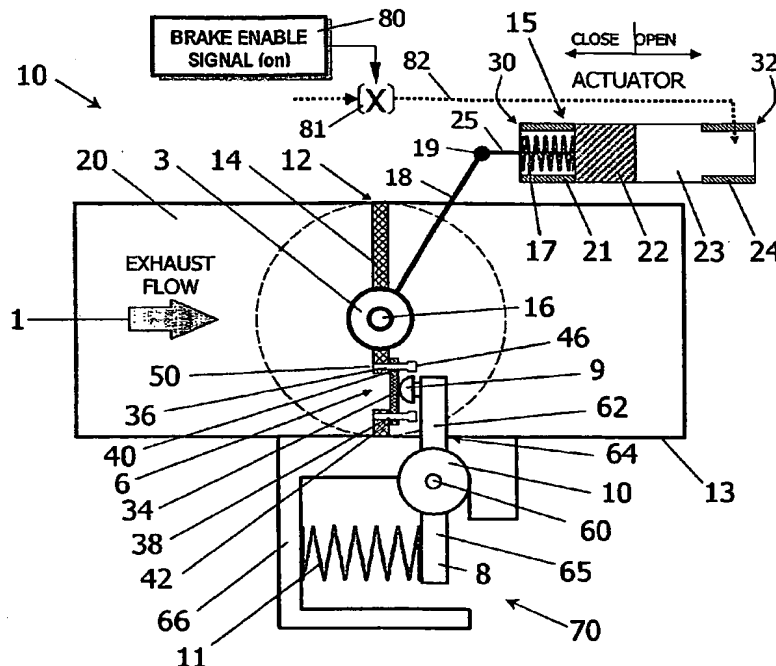
V5J 3H9 (CA). **MENEELY, Vincent, A.** [CA/CA]; 19596 96th Avenue, Surrey, British Columbia V4N 4C3 (CA). **GAVRIL, Gabriel** [CA/CA]; 2009 Birch Grove, Burnaby, British Columbia V5A 4A3 (CA). **SPENCE, Tamara** [CA/CA]; 36192 Cassandra Drive, Abbotsford, British Columbia V3G 2M6 (CA). **HARTLEY, John, P.** [US/US]; 8894 Giles Road, Blaine, WA 98230 (US).

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(54) Title: APPARATUS AND METHOD FOR PRESSURE RELIEF IN AN EXHAUST BRAKE



(57) Abstract: An exhaust brake has a body with a passageway for exhaust gases therein. A valve member is movably located within the passageway for selective movement between an open position where the valve member opens the passageway and exhaust gases are free to move through the passageway and a closed position where the valve member blocks the passageway and the passage of exhaust gases through the passageway. The valve member has an aperture therethrough to permit a limited flow of exhaust gases through the aperture when the aperture is open. An exhaust valve actuator mechanism is coupled to the valve member for moving the valve member between the open position and the closed position. A closure member is positioned adjacent to the aperture. The closure member has an open position where the closure member is spaced apart from the valve member and permits a flow of exhaust gases through the aperture and the closure member having a closed position where the closure member contacts the valve

member about the aperture and inhibits a flow of exhaust gases through the aperture. An actuator member operatively engages the closure member. There is a relief actuator mechanism, the relief actuator mechanism including an actuator member that operatively engages the closure member. The relief mechanism brings the closure member into operative engagement with the valve member with sufficient force, when the valve member is closed, to maintain the closure member in the closed position when the exhaust gases are below a predetermined pressure.